

## Town of DeRuyter



Contact	Title	Phone
Dan Degear	Town Supervisor	(315) 367-1355
Becky Marshall	Town Clerk	(315) 367-1350
Roger Cook	Code Enforcement	(315) 367-1353
Walter Cook	Highway Superintendent	(315) 852-6272
Randy Wood	Planning Board Chair	(315) 367-1357
Kenneth Kunkle	ZBA Chairman	(315) 367-1357

### Background

The Town of DeRuyter is a community of 1,589 residents located in the south western corner of the county, south of the Town of Cazenovia and west of the Town of Georgetown. The Village of DeRuyter is located within the township but will have its own section in this plan. Seventy three percent of the population is between the ages of 18 and 65 while fifteen percent are over the age of 65 (223 residents). The town is comprised of approximately 20 square miles. The town has an equalized assessed value of approximately 65.6 million dollars. There are 867 housing units located in the town of which 273 are considered single family owner occupied units. There is no real commercial development taking place at this time. This remains a very heavily agricultural community with very productive agricultural lands.

# MADISON COUNTY HAZARD MITIGATION PLAN 2016

## Land Use and Development Trends

The town remains primarily rural with continuing trends away from farming on marginally productive land and slow but steady conversion of those parcels with highway access to large-lot residential development. The traditional high-density development area remains the shoreline around DeRuyter Lake (Toughnioga Reservoir) where the conversion process from rustic camps to larger seasonal and year-round capable residences continues with great rapidity. While land use regulations, designed primarily to regulate development in the lake watershed area, have been in place for approximately 15 years with significant success, the conversion and expansion of pre-existing, non-conforming houses remains a significant planning and development challenge. Lot coverage restrictions are now under discussion in order to potentially mitigate the effects of housing conversions.

## Assets

- The town offices are located in the Town Office Building (former school house) on Route 13 (Utica Street) in the Village of DeRuyter.
- The DeRuyter Free Library is located in the Town Office Building.
- The town highway barn is located on Route 13 at the north edge of the Village of DeRuyter.
- The DeRuyter Fire Department is located on Division Street in the Village of DeRuyter.
- The DeRuyter Central School located on Railroad Street is a Red Cross shelter but does not have backup power generation capabilities.

## Local Organization and Regulations

- The Town Board meets on the second Thursday of each month.
- The Town Planning Board in place to review new development and proposed sub-divisions. Meetings are on the second Wednesday of each month.

## The Planning Process

The Town of DeRuyter Supervisor, Dan Degear, met with SWCD Manager Steve Lorraine on 02/12/2015 to discuss problem areas from the flooding in the summer of 2013 and potential projects in the township.

## Public Involvement

Two meetings were held at which members of the public were invited to provide input on the hazard mitigation planning process. These meetings were publicized in the Syracuse Post Standard, Oneida Daily Dispatch, Canastota Bee Journal, and Cazenovia Republican. No members of the public attended these meetings. One citizen did call Madison County Soil and Water Conservation District from the City of Oneida to express concerns about flooding there. As soon as the first draft of the entire plan for Madison County is finished, it will be posted on the Madison County website. All members of the public will be provided a means of providing input at that time.

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## Input from Neighboring Communities, Agencies, Businesses, Academia, Nonprofits and Other Parties

- DeRuyter Lake Association

## Existing Plans, Studies, Reports, and Technical Information

- Town of DeRuyter Land Use Plan
- Town of DeRuyter Land Use Regulations
- Town of DeRuyter Subdivision Ordinance

## Hazards

As part of the Madison County Comprehensive Emergency Management Plan, a Hazard Analysis was conducted using the HAZNY program with data supplied by the National Oceanic & Atmospheric Administration, and ESRI Hazards data. This HAZNY analysis identified Moderately High Danger in order from Severe Storms, Transportation Accidents, Winter Storms, Fires, and HAZMAT (in Transit). The HAZNY analysis identified Moderately Low Danger in order from Ice Storm, Terrorism, Flood, Utility Failure, Water Supply Contamination, Tornado, Oil Spill, HAZMAT (Fixed Site), Ice Jam, Infestation, Radiological (Fixed Site), Extreme Temperatures, Epidemic, Drought, and Explosion. The Madison County Hazard Mitigation Plan is required by FEMA to address natural disasters. Sections of this plan have been written on a County-wide basis for Severe Storms, Transportation Accidents, Winter Storms, Fire, Ice Storm/ Utility Failure, Flood/ Hurricane, and Tornado. The following table is used to determine whether or not the local community's hazard danger differs from the County as a whole for natural disasters and a few chosen man-made disasters. The local community can also decide whether or not a section on a particular hazard should be written specifically for that municipality.

Hazard	Madison Co. Class.	Madison Co. Ranking	Town Of DeRuyter Probability Greater (G), Lesser (L) About Equal (E)	Town of DeRuyter Issues Beyond County-wide Plan Yes (y), No (n)
Severe Storms	Mod. High	312.2	E	N
Transportation Accidents	Mod. High	285.2	L	N
Winter Storms	Mod. High	272.2	E	Y
Fires	Mod. High	265.2	L	N
Ice Storms	Mod. Low	236.2	E	N
Flood	Mod. Low	222.8	G	Y
Utility Failure	Mod. Low	218.5	E	N
Tornado	Mod. Low	202.5	E	N
Ice Jam	Mod. Low	180.5	L	N
Infestation	Mod. Low	173.8	E	N
Extreme Temperatures	Mod. Low	169.8	E	N

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Epidemic	Mod. Low	164.2	L	N
Drought	Mod. Low	164.2	E	N
Wildfire	Low	160.5	E	N
Wave Action	Low	159.5	E	N
Dam Failure	Low	159.2	G	N
Hurricane	Low	158.8	E	N
Earthquake	Low	150.5	E	N
Blight	Low	96.2	E	N
Landslide	Not Rated		E	N

### Types of Mitigation Measures

This section is used to indicate the types of mitigation actions that already are in use in the Town of DeRuyter.

**Prevention** - Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses.

	Building Code	Density Controls	Design Review Standards	Easements	Environmental Review Standards	Flood plain Development Regulations	Floodplain zoning
DeRuyter Program	State BOCA Codes	Under consideration	State Health Codes Fire Codes	No	SEQR for major subdivisions Local subdivision ordinance	Federal Flood Insurance Rules apply	No

Transfer of Development Rights	Hillside Development Regulations	Open Space Preservation	Performance Standards	Streambank Setback Regulations	Special Use Permits	Stormwater Management Regulations	Subdivision & Development Regulations
State & Federal Programs Available for Ag	No	No	Time Limit on Permits	State Health rules for septic systems		State Regs Apply	Yes

**Property Protection** - Actions that involve the modification of existing buildings or structures to protect them from a hazard, or removal from the hazard area.

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	Acquisition of Hazard Prone Structures	Construction of Barriers Around Structures	Elevation of Structures	Relocation Out of Hazard Areas	Structural Retrofits (e.g. flood proofing)
DeRuyter Program	No	No	No	No	No

**Public Education and Awareness** - Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them.

	Hazard Information Centers	Outreach Programs	Real Estate Disclosure	School-age and Adult Education Programs
DeRuyter Program	No	Education of Elected to NIMS Standards	State Rules Apply	Fire Safety Education Headstart

**Natural Resource Protection** - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems.

	Best Management Practices	Forest & Vegetation Management	Sediment & Erosion Control Regulations	Lake Corridor Management	Stream Dumping Regulations	Urban Forestry & Landscape Management	Wetlands Development Regulations & Restoration	Watershed Management
DeRuyter Program	Technical Assistance from County SWCD	Section 319 Program of Forest Tax Law available through DEC	State Regs for greater than 1 acre development	Lake Watershed Regulations	State Rules Apply	No	State & Federal Rules Apply	DeRuyter-Oneida Lake

**Emergency Services** - Actions that protect people and property during and immediately after a disaster or hazard event.

	Critical Facilities Protection	Emergency Response Services	Hazard Threat Recognition	Hazard Warning Systems	Health & Safety Maintenance	Post Disaster Mitigation

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DeRuyter Program	No	DeRuyter Fire Dept., Smith Ambulance Service, State Police, County Sheriff	MSDS Sheets on File with Fire Department	911 Center Alert System: Fire Department Siren	County Health Department Plan	Red Cross
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**Structural Projects** - Actions that involve the construction of structures to reduce the impact of a hazard.

	Channel Maintenance	Dams/ Reservoirs	Levees & Floodwalls	Safe Room/ Shelter
DeRuyter Program	No	State Canal Authority Dam at DeRuyter Reservoir	No	Red Cross Shelter at DeRuyter Central School

### **Incorporation of Hazard Mitigation Plan requirements into local planning mechanisms**

The foregoing list of existing mitigation measures and the proposed mitigation actions that follow will be considered during the next rewrite of the Town of DeRuyter Land Use Plan.

### **Mitigation Actions by Hazard**

Appendix D provides a matrix that lists by category the possible mitigation actions and projects applicable to specific hazards. The community should consider this matrix when deciding a course of action in mitigating a particular hazard.

#### **A. Flooding**

As a result of the topography of this area, DeRuyter is prone to recurring flash flooding incidents. The steep gradient of stream beds results in high flows of water during summer thunderstorm that carry large quantities of bed load gravel. This gravel is then deposited in culverts, plugging them and causing roads to be flooded and damage to private property.

#### **Mitigation Goals**

Minimize loss of property, risk of injury, damage to the environment, and loss of infrastructure from 500 year flooding events.

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## Historical Events

*January '96 Flood* – This was a region wide event in which a warm rain fall melted an accumulated snowpack. It was believed to be comparable to the 50 year frequency storm of 4.9 inches in a 24 hour period.

*May 2000 Flood Event* – This spring runoff event was declared disaster FEMA 1335 DR NY.

*April 2-4, 2005 Severe Storms and Flood Event* – This was declared disaster FEMA 1589 DR NY. Flooding was caused by a 1 to 4 inch rain in conjunction with snowmelt. Before this storm rivers and streams had high flows due to a previous rainstorm on March 28<sup>th</sup>. The Town of Lebanon was hardest hit of all of the Towns in Madison County. There were some road closures and flooded basements in the towns of Lebanon and Hamilton. A few roads and a bridge were damaged. Creeks, streams, and the headwaters of the Chenango River were all out of their banks. According to NOAA, damage was \$100,000.

*June 2013 Severe Rain Event* - Severe rainstorms hit fifteen Upstate New York Counties from June 27 to July 4, 2013, causing massive flooding, erosion, property damage, long-term power outages for more than thirteen thousand residents, long-term unavailability of potable water, and even loss of life. The federal government declared a local state of emergency for Madison County along with 7 other counties and 15 local municipalities.

## Potential Losses

According to the Madison County Assessment office records, the Town of DeRuyter has 272 parcels with at least some land in the 100 year flood plain, not including parcels in the Village of DeRuyter. An overlay of aerial photography, parcel boundaries and the 100 year flood plain was examined for the Town of DeRuyter. There are 41 parcels with structures in the flood plain in the immediate vicinity of DeRuyter Lake including 40 houses and 1 bar; flood levels here would be affected by the dam controlled by the Canal Authority. The average value of the parcels with structures in the lake flood plain is \$170,000. If each of these structures sustained an average of \$10,000 damage during a 100 year flood, total damage would be \$410,000. Another 4 parcels have structures in the flood plain outside of the lake watershed including 3 houses and a dairy farm. The average value of these parcels away from the lake is \$130,000. If each of these 4 parcels sustained \$5,000 damage during a 100 year flood, total damages outside of the lake watershed would be \$20,000.

## Mitigation Strategies

Project #	Project Name	Description	Lead Agency	Estimated Cost
T/DeRuyter#1	Carey Road Culvert Repairs	Build increased drainage capacity of the under-road structure reducing flooding and road erosion during severe storm events.	Town of DeRuyter	\$144,000
T/DeRuyter#2	Carey Road Streambank Stabilization	Flooding of an unnamed tributary to the Middle Branch Tioughnioga Creek resulted in damages to Carey Road and adjacent homes in the Town of DeRuyter.	Town of DeRuyter	\$109,680

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T/DeRuyter#3	South Hill Road Stabilization and Restoration	Flooding eroded roadside ditches resulting in damages to South Hill Road. The project will include the installation of four catch basins with grates, replacement of 400 feet of culvert pipe and repaving of 0.15 miles along South Hill Road creating an underground closed drainage system.	Town of DeRuyter	\$37,272
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### Prioritization

The STAPLEE process is the means by which proposed mitigation actions are prioritized for a community. The STAPLEE process utilizes the following criteria:

- **Social:** Will this action be acceptable to the community and individuals affected?
- **Technical:** Is the action a long term technically feasible solution with little or no secondary impacts?
- **Administrative:** Are the staff and funding available to implement and maintain the action?  
NOTE: Inadequate resource did not eliminate consideration of an action.
- **Political:** Is the action supported by political leaders and the public?
- **Legal:** Does the municipality have the legal authority to implement the proposed action?
- **Economic:** Is this action a cost effective method for providing hazard mitigation and community benefits?
- **Environmental:** Is this action consistent with community environmental goals?

The following table uses the STAPLEE System to rate proposed mitigation actions.

+ 1 is Favorable, -1 is Unfavorable, N is Neutral or Not Applicable

A Score of 6-7 is a high priority, 3-5 is a medium priority, 2 or less is a low priority

Proposed Mitigation Action								
	Soc	Tech	Admin	Polit	Legal	Econ	Enviro	Score
Carey Road Culvert Repairs	+1	N	-1	+1	+1	N	+1	3
Carey Road Streambank Stabilization	-1	+1	-1	+1	+1	+1	+1	5
South Hill Road Stabilization and Restoration	+1	N	-1	+1	+1	+1	+1	5



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## Plan Monitoring and Update

The Madison County Office of Emergency Preparedness will be responsible for monitoring the status of the County Hazard Mitigation Plan and all of the subsections of the plan specific to local municipalities. During the first quarter of every calendar year, the Emergency Preparedness Director will (most likely by e-mail) contact the Town of DeRuyter's Highway Superintendent and submit a copy of the evaluation form listed in appendix EF. The Town's Highway Superintendent will complete and return this form within 10 business days.

During the second quarter of the year, the County Emergency Preparedness Director, will prepare an annual summary report for progress in implementing the County Hazard Mitigation Plan. Included in this plan will be the following:

- A summary and analysis of all disasters that have struck the City of Oneida during the previous calendar year,
- a gap analysis for the hazard mitigation plan for any disasters that occurred during the previous calendar year,
- a listing of funding opportunities made available from FEMA and NYS DHSES during the twelve months prior to the annual summary report,
- a summary of progress that has been made towards accomplishing mitigation measures during the previous calendar year,
- problems encountered in implementing the plan,
- and, recommendations for changes to the Hazard Mitigation Plan.

A copy of this report will be sent to the City's Emergency Director and will be posted on the Madison County Website. Public Comment will be accepted based on review of these reports and the County's Plan available on this web site.

Every five years after the plan receives its FEMA approval and adoption by the DeRuyter Town Board, the County Emergency Management Director will update the County Hazard Mitigation Plan and the Town of DeRuyter annex based on reports supplied by the Town Highway Superintendent and other municipalities, as well as input from the public. This updated plan will be submitted to the DeRuyter Town Board for approval before being forwarded to FEMA.